

Amendments to the Claims:

The following listing of claims replaces all prior claims and listings in this application.

Listing of Claims:

1.(Currently Amended) A method of graphically representing clickstream data of a shopping session on a network comprising:

extracting one or more shopping sessions from one or more Web server logs, said shopping sessions comprising shopping steps and said shopping steps comprising at least one of product viewing, product selection, shopping cart placement and purchase, of one or more Web server systems of one or more online stores;

deriving one or more micro-conversions from the one or more shopping sessions, the micro-conversion comprising a shopper's conversion progress from one shopping step to another; and

graphically representing, on a computer-generated graphical display, clickstream data from one or more of the micro-conversions in a first visualization, the first visualization comprising at least three axes representing shopping steps and one or more lines that each correspond to at least one said shopping session, at least one of the one or more lines intersecting less than all of the axes and terminating at the axis wherein the at least one said shopping session ends.

2-4.(Canceled)

5.(Previously Presented) A method, as in claim 1, where the first visualization comprises a parallel coordinate system and one or more extension components including one or more parallel axes of sequential events, one or more dependent variable values of timestamps, one or more filters, one or more categorizers, and one or more hyperlink associations.

6.(Previously Presented) A method, as in claim 5, where the parallel coordinate system comprises a series of parallel lines that are placed equidistantly, each parallel line representing a specific dependent variable and dependent variable values being plotted along a respective

axis, and an independent variable that is represented by polygonal lines connecting the corresponding dependent variable values.

7-8.(Canceled)

9.(Previously Presented) A method, as in claim 5, where the dependent variable values of timestamps is an assignment of timestamp values as data points to a series of sequential events that are assigned to the equal number of parallel axes in a parallel coordinate system.

10.(Canceled)

11.(Previously Presented) A method, as in claim 5, where the filter is a means to select one or more groups of polygonal lines viewed in the parallel coordinate system.

12.(Currently Amended) A method, as in claim 5, where the categorizer is a parallel axis in the parallel coordinate system for categorizing polygonal lines in the system of the first visualization.

13.(Previously Presented) A method, as in claim 12, where the categorizer includes at least one of the following: referrer Web sites of sessions, internet service providers of sessions, lengths of sessions, methods used to find product information by session, methods used to find service information by sessions, products viewed, services viewed, items placed in a shopping cart, items purchased by sessions, time points of sessions, geographic regions where sessions originate, age, sex, education, and income of session originators, sales history of owners of sessions, and Web page patterns accessed by one of sessions and owners of sessions.

14.(Previously Presented) A method, as in claim 5, where the hyperlink association is association of at least one hyperlink with the line representing a session, and the line comprises a hyperlink to a Web page that provides additional information of the session.

15.(Previously Presented) A method, as in claim 1, wherein at least the first visualization represents, via dropouts of one or more lines, where the online store loses customers.

16-17.(Canceled)

18.(Previously Presented) A method, as in claim 1, further comprising displaying additional information of one or more sessions on at least one Web page by using at least one hyperlink association.

19-29.(Canceled)

30.(Currently Amended) A system that operates to provide a service visualization to a user, the service system comprising:

one or more central processing units, one or more memories, and one or more network interfaces to one or more networks;

a sessionization process that receives one or more Web server logs from one or more online stores, and generates one session table for each session found from requests recorded in Web server logs;

a shopping step finder process that receives one or more session tables, and generates one micro-conversion table for each given session table, each micro-conversion table comprising one or more shopping steps; and

a visualization process that receives one or more micro-conversion tables, and generates one or more micro-conversion visualizations of shopping steps from one or more of the micro-conversion tables, wherein the visualization comprises providing a graphical display of clickstream data received over a network, the clickstream data representing a virtual path that one or more third parties followed through the internet, the graphical display comprising axes that represent points along the virtual path shopping steps and a line that represents the virtual path that is plotted against the axes but that crosses less than all of the axes at least one of the sessions.

31.(Currently Amended) The system of claim 30 wherein one of the axes represents a product purchase shopping step and the line terminates prior to crossing the product purchase axis.

32.(Canceled)

33.(Currently Amended) The system of claim 30 wherein the graphical display visualization further comprises a hyperlink associated with the line that links to a Web page for displaying additional information of the virtual pathsession that the line represents.

34.(Currently Amended) The system of claim 30 wherein the service visualization process further ~~comprises providing~~ provides one or more filters that may be used to dynamically change the graphical display visualization.

35.(Currently Amended) The system of claim 34 wherein the filter dynamically changes the graphical display visualization based on at least one of the following aspects of the virtual path: hierarchical session represented by the line: hierarchical browsing, keyword search, parametric search, and recommendations.

36.(Currently Amended) The system of claim 30 wherein the graphical display visualization is provided to the user over a network.

37.(New) A method of doing business on a network comprising:
receiving one or more Web server logs from one or more online stores' Web server systems;
generating one or more session tables from the one or more Web server logs;
generating one or more micro-conversion tables from the generated one or more session tables, each micro-conversion table comprising one or more shopping steps;
generating one or more micro-conversion visualizations of shopping steps from one or more of the micro-conversion tables; and

interactively generating one or more variations of the generated micro-conversion visualizations upon interactive requests from one or more users.

38.(New) The method, as in claim 37, where the received one or more Web server logs includes one or more Web page request records.

39.(New) The method, as in claim 38, where the Web page request record comprises a timestamp that is the system-generated time when the request is made, a user identification that is a unique number identifying the user who made the request, a session identification that is a unique number identifying the session which made the request, a referrer that is the Web page the session sees immediately before making this request, a current page that is the Web page requested, and a group of hyperlinks that is contained in the current page.

40.(New) The method, as in claim 37, where the session table includes one or more Web page request records with all the session identification values in a session table being the same.

41.(New) The method, as in claim 37, where each micro-conversion table further comprises product or service entries for each shopping step.

42.(New) The method, as in claim 41, where the shopping steps include a product impression that is the view of hyperlink to a Web page presenting a product and/or a service, a clickthrough that is the click on the hyperlink and view of the Web page of the product and/or service, a basket placement that is the placement of the item in the shopping basket, and a purchase that is the purchase of the item and the completion of the transaction.

43.(New) The method, as in claim 41, where the product or service entry comprises a product or service identification that is a unique number identifying the product or service, and a timestamp when the corresponding shopping activity happens.

44.(New) The method, as in claim 37, where the micro-conversion visualization comprises a traditional parallel coordinate system and one or more extension components.

45.(New) The method, as in claim 44, where the traditional parallel coordinate system is a parallel coordinate system comprising a series of parallel lines that are placed equidistantly, each parallel line being assigned a specific dependent variable and dependent variable values being plotted along the respective axis, and an independent variable that is represented by polygonal lines connecting the corresponding dependent variable values and illustrating a relationship between an independent variable and the dependent variables appearing on each axis.

46.(New) The method, as in claim 44, where the extension components include one or more parallel axes of sequential events, one or more dependent variable values of timestamps, one or more dropouts of polygonal lines, one or more filters, one or more categorizers, and one or more hyperlink association.

47.(New) The method, as in claim 46, where the parallel axes of sequential events is an assignment of a series of sequential events to parallel lines in a parallel coordinate system.

48.(New) The method, as in claim 47, where the sequential events include one or more steps of shopping in one or more stores, and one or more product or service development steps.

49.(New) The method, as in claim 46, where the dependent variable values of timestamps is an assignment of timestamp values as data points to a series of sequential events that are assigned to the equal number of parallel axes in a parallel coordinate system.

50.(New) The method, as in claim 46, where the dropout of a polygonal line is disappearance of a polygonal line before the line reaches the last parallel axis in a parallel coordinate system with the parallel axes of sequential events.

51.(New) The method, as in claim 46, where the filter is a means to select and/or deselect one or more groups of polygonal lines viewed in a parallel coordinate system.

52.(New) The method, as in claim 46, where the categorizer is a parallel axis in a parallel coordinate system whose purpose is to categorize polygonal lines in the system.

53.(New) The method, as in claim 52, where the categorizer includes one or more of the following: the referrer Web sites of sessions, the Internet Service Providers of sessions, the lengths of sessions, the methods used to find product or service information by sessions, the geographic regions where sessions come from, the ages, sex, education levels, and income levels of the owners of sessions, the sales history of the owners of sessions, the Web page patterns accessed by sessions or by the owners of sessions, either or not ordered by session, or by time.

54.(New) The method, as in claim 46, where the hyperlink association is the association of one or more hyperlinks with the polygonal line representing a session, clicking on the polygonal line opens a Web page delivering detail information of the session.